

## Abstract

An SINR estimating unit (301) of a receiver apparatus (32) measures first and second demodulated signals ( $y_1$ ,  $y_2$ ) to calculate SINR (ratio of signal power to sum of interference power and noise power) for each signal sequence. A transmission parameter deciding unit (111) decides, based on the SINR, a transmission parameter ( $X_{next}$ ) used by a transmitter apparatus (31) for controlling the transmission for each signal sequence, and then feeds the decided transmission parameter back to the transmitter apparatus (31). First and second mapping units (201-1, 201-2) of the transmitter apparatus (31) controls, based on the transmission parameter ( $X_{ctrl}$ ) as fed back, the modulation level for each signal sequence.

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